INJECTION SYSTEM

User manual

INJECTION SYSTEM

An injection device for fillers and rejuvenation products

User manual

1 | Description 02

2 | Warnings 03

3 | Equipment overview 04

4 | Installation 05

5 | Assembling 06

6 | Instructions for use 07

7 | Injection techniques 08

8 | Taking care of your Injection System 10

9 | Conditions of warranty 11

10 | FAQ 12

11 | Diagnosis protocol 13

12 | Technical characteristics 14

13 | Notes 16

1 | Description

The **Anteis Injection System** is an automated injection system designed for local injections with **Anteis aesthetic product lines**.

The **Anteis Injection System** is a modern alternative to traditional injection procedures. For each injection to be successful, the practitioner must follow the usual precautions.

Why use the Anteis Injection System:

- Less pain for the patient
- More comfort and easy to use for the practitioner
- Better controlled treatment (depth, flow, volume)
- Reduced downtime (for skin rejuvenation)
- Better integration into the dermis for perfectly homogeneous results

Using the Anteis Injection System

- The **Anteis Injection System** must only be used by a qualified and trained doctor.
- The **Anteis Injection System** allows you to perform all types of injections permitted within the Anteis product lines.
- Anteis did not test the **Anteis Injection System** with any other product and therefore cannot be responsible for problems that may occur when using the **Anteis Injection System** with any product other than Anteis aesthetic products.
- The usage of the **Anteis Injection System** remains the responsibility of the practitioner, who is the only one who can evaluate the indications and contraindications concerning the technique and the product used.
- The practitioner should refer to the Instructions for Use of each product used concerning the specific contraindications for the product and the recommended needles.
- Use only the needles provided or recommended by Anteis. The use of any other needle or canula will be the responsibility of the practitioner.

2 | Warning on consumables

Do not re-use the needles, the Anteis syringes or the syringe adaptor;
these parts must be discarded after use in a container adapted for this purpose.

Electric shocks - To be checked before each use

- The connection must be on an AC single-phase network in compliance with the description plate, located underneath the control unit.
- Installation must be equipped with a safety system by means of a circuit-breaker.
- Prior to use, check the state of the plug and power cable.
- Do not pull the cable to remove the plug from the plug socket.

Levels of safety

- Main power cable: dangerous voltage.
- Do not use the device with any power cable other than the one provided (AULT, type MW128RA1803F01).
- Handpiece cable / pedal / control unit: secondary circuit (low voltage).

General recommendations

- Keep the **Anteis Injection System** out of reach of children.
- The equipment cannot be used where there is an inflammable mixture of air, oxygen or nitrogen.
- Your apparatus must not be exposed to sunlight or be close to a radiator or air-conditioning unit.
- Do not expose the **Anteis Injection System** to water or chemical products.
- The foot pedal is the element which commands the device. Check that it is working correctly before using the device. Do not immerge it. Replace the pedal after any mechanical degradation.

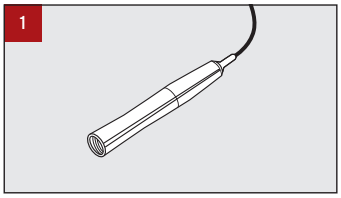
Electrical characteristics

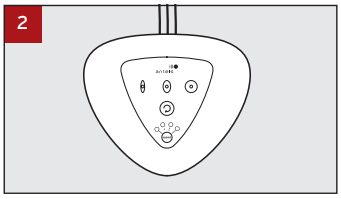
Voltage	Frequency	Maximum amperage	Electrical protection class	Reference
110/240V	50/60Hz	1.6 A	II	Anteis

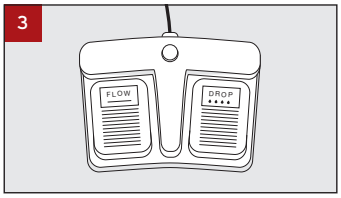
Maximum recommended ambient temperature (Tmra) : 40°C

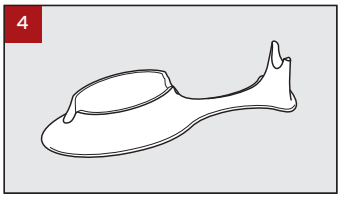
CE
0120

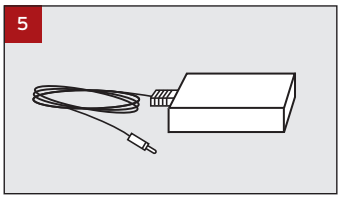
3 | Equipment overview

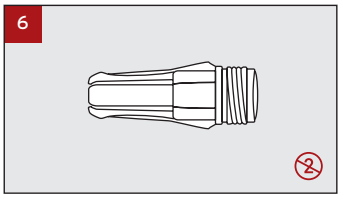


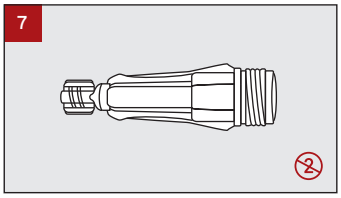












The content of the package

1 Hand-piece

2 Control unit

- Return button
- Indicator for size of drops / flow rate
- Speed of drop deposit (slow, moderate, quick)

3 Foot pedal

- Drop mode pedal
- Flow mode pedal
- Switch bottom for size of drops/flow rate

4 Hand-piece holder

5 External power cable

User Guide

Spare parts – sold separately

6 Box of 10 adaptors (without syringe)

7 Boxes of 5 ready to use Anteis syringes for Injection System

Equipment advantages

Accuracy:

- Pen grip
- Controlled usage:
  - pre-set speed, volume and flow rate
  - adjustment of the speed of drop deposit
- Volume or flow rate not dependent on product characteristics

Designed for comfort

- No muscular fatigue (tendonitis)
- Less pain for patient during injection

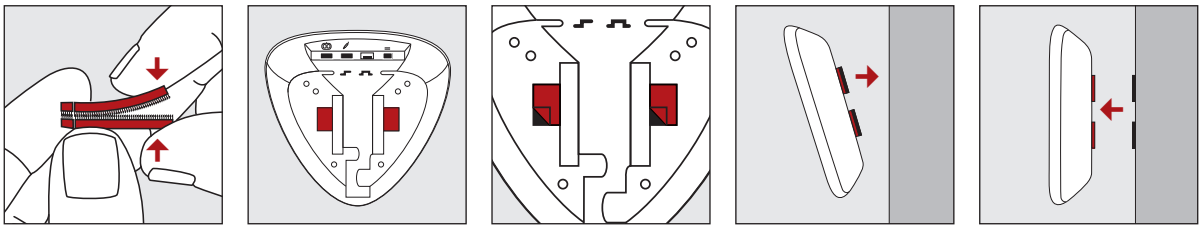
Safety

- Blocked needle detection
- No risk of flying needle or needle breakage

4 | Installation

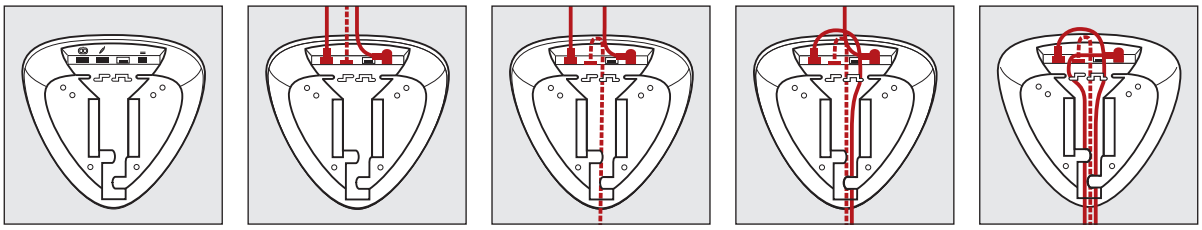
Choosing the location

- The **Anteis Injection System** can be used flat or wall-mounted, so it is in the best position for your workstation.
- The control unit is supplied with non-slip feet, allowing you to place it on a horizontal surface. When the unit is wall-mounted, fit the detachable adhesive strips provided as shown in the photos and fix it on a stable clean dry surface. In this case, adhesion is optimal after 2 hours. This fixing system allows you to clip/unclip the control unit at will.



Connection

Connect the cables according to the pictograms located underneath the control unit.
Make sure that the cables for the hand piece and the pedal are connected in the right slots.
You can place the cables beneath the control unit, using the guides, as indicated in the pictures below.



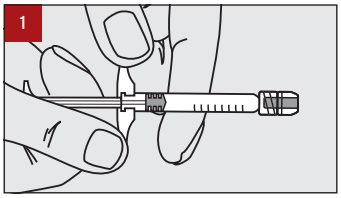
- To avoid accidental falls, arrange the cables so that they do not disturb movements around the apparatus.
- Connect the power supply to wall plug.

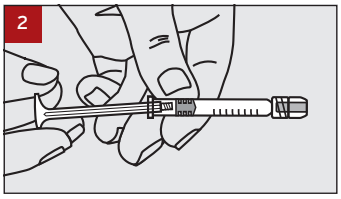
Starting-up

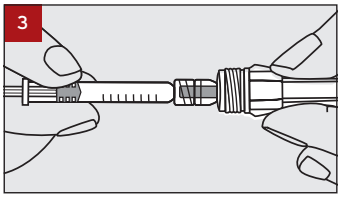
To activate your system unit, press one of the injection pedals or the return button on the control unit.
The control unit produces a sound signal and performs an automatic return.
Your **Anteis Injection System** is ready to use.

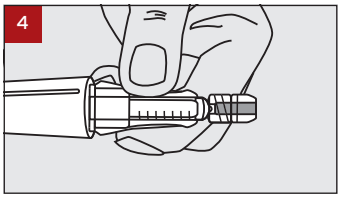
To reduce energy consumption, the **Anteis Injection System** automatically switches off after 20 min.
Simply press the return key on the control unit or on one of the 2 pedals to automatically reactivate it.

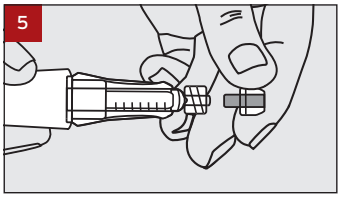
5 | Assembling

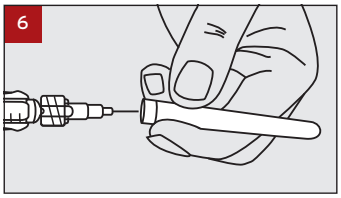


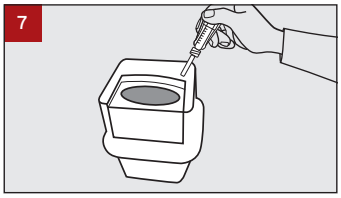












Assembling of Hand-piece, Syringe, Adaptor and Needle

⚠ Single-use gloves are highly recommended.

- For regular syringes follow step 1 to 7
- For syringes already adapted to the **Anteis Injection System** follow step 4 to 7

---

1 Remove the finger grip

2 Unscrew the plunger rod

⚠ Make sure to unscrew the plunger rod and to not pull it out

3 Insert the needle in the adaptor

---

4 Screw the adaptor on the hand-piece

5 Remove the luer-lock cap

6 Screw the needle as usual, until you reach its blockage

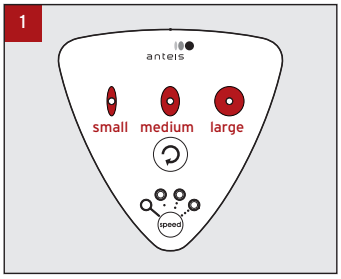
⚠ Make sure the needle is assembled correctly to avoid any popping-out of the needle

Your **Anteis Injection System** is now ready!

---

7 Destruction of needle, syringe and adaptor in an adapted container. To avoid any risk of picking yourself while replacing the tip cap, we recommend that you dispose of everything without recapping the needle.

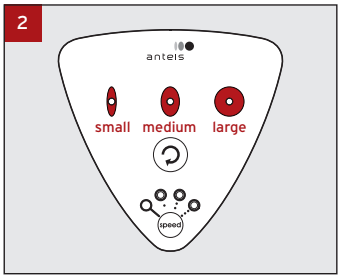
6 | Instructions for use



Press either pedal or the return button to activate the automatic piston detection.
A small drop may be ejected during this auto-detection.
The **Anteis Injection System** is now ready for injection.

Changing Mode

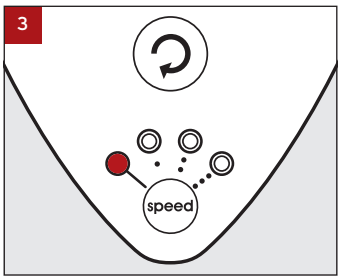
Press either the Flow pedal or the Drop pedal



A. Injection "Flow Mode"

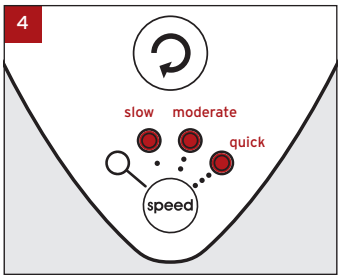
You can choose between **3 injection flow rates (small, medium or large)** 1 by pressing the switch button on the foot pedal.
Corresponding LED on central unit is **on constantly**.

Press continuously on the "Flow" pedal (left).
To stop injection, simply hold up the pedal.



B. Injection "Drop Mode"

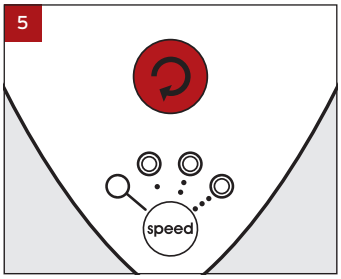
You can choose between **3 sizes of drops (small, medium or large drop)** 2 by pressing the switch bottom on the foot pedal. Corresponding LED on central unit starts **flashing** when the drop pedal is pressed.



You can inject:

- **Manually drop by drop** 3, by a single press on the selected pedal (right) each time you want a drop. This is the manual mode.
- **Automatic drop by drop**, by continuously pressing on the selected pedal (right).

You can adapt the **speed of drop deposit (slow, moderate, quick)** 4 by pressing the speed button on the central unit.
The end of drop is indicated by the "beep" sound. When you hear this signal, withdraw the needle and move it to the next papula.



Controlling the injection plunger return

The control unit key activates the plunger's return to its baseline start position. This function can be activated at any time. A sound signal indicates the complete return of the plunger.

When the injection is completed or the syringe is empty, press the return button 5 before removing the adaptor.

anteis

7 | Injection techniques

The **Anteis Injection System** should be handled like a pen which means as close as possible to the needle.

Six essential techniques for the usage of Anteis fillers

There are six essential and recognized techniques used for injecting dermal fillers to model facial contours and volumes and to fill wrinkles and folds:

1. The cross-hatching technique,
which is preferred for modifying facial contours and enhancing volume. This consists of two series of parallel injections using the retro-tracing technique. They are both administered perpendicularly within the same layer of skin.

2. The sandwich technique,
which involves injecting a resorbable implant into the deeper dermis and a resorbable filler into an upper layer of the dermis (usually the middle or superficial dermis), according to the area under treatment and the desired volume. The sandwich technique can be used for a single injection point or multiple injection points. It can be combined with any of the traditional injection techniques.

3. The linear retro-tracing technique,
which consists in inserting the needle up to almost its entire length, while keeping it closely parallel to the skin's plane and injecting the gel in **Flow mode** while slowly withdrawing it, while applying a much lesser pressure to the syringe. This allows the threads of gel to be deposited within the tissues.

4. The antero-tracing technique,
which consists, as for the linear retro-tracing technique, in inserting the needle while keeping it closely parallel to the skin's plane. The gel is injected in **Flow mode** while slowly pushing the needle into the dermis (up to almost its entire length) and applying low pressure to the syringe.

5. The fan technique,
which consists of inserting the needle for linear threading in **Flow mode**. At the end of the gel line, the needle direction is changed and a new line of gel is injected without withdrawing the needle tip from the skin. This allows covering a relatively large area with a fan of threads, while limiting the number of puncture sites.

6. The serial puncture technique,
which consists in a linear series of injections in **Drop mode** along the same wrinkle over the extent of the same zone. The injections deposit small quantities of the product in the dermis; sufficiently close together, they make it possible to form a continuous line that fills the wrinkle or the surface treated. In order to avoid any irregularity or empty spaces, the injections must be very close together and the zones treated must be massaged.

7 | Injection techniques

Two different techniques can be used for rejuvenation and rehydration treatments

1. The multi-puncture technique (nappage)

This technique involves injecting the product very superficially at the dermo-epidermal level. The product is injected in **Flow mode**, using rapid, regular movements, making the needle travel over the skin while performing numerous injections to cover the whole area. After the injection session, patients do not experience any undesirable effects. Their complexion is radiant, and their skin revitalized and rehydrated. They can return to their social life immediately.

2. The micro-papular technique

This technique involves injecting in **Drop mode** a very small quantity of product into the superficial dermis, at multiple and precise injection sites. At each of these injection sites, this technique creates a tiny papule. These disappear between 24 hours and a few days (depending on drop size, on skin thickness and on depth of injection) and even more quickly if the patients massage them. The areas treated in this way are genuinely toned and tightened. This explains why this technique is used especially in the case of mature skin, even when there is major hormonal deficiency.

Guidelines for adapting the Anteis Injection System according to the technique used

	Filler			Rejuvenation	
Indication	Fine Line	Moderate wrinkle	Deep Folds / Volume	Micropapular	Nappage
Mode **Flow / Drop**	Flow	Flow	Flow	Drop	Flow
Size **Flow rate / Drop size**	Small / Medium	Medium	Large	Small / Medium*	Small
Speed*				Slow / Moderate / Quick**	

* Small Drop is recommended for thin skin.

** The speed can be adjusted in Drop Mode only. It's advised to choose the appropriate speed according to your experience.

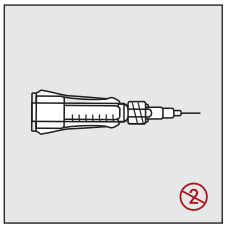
8 | Taking care of your Injection System

Cleaning control unit, hand-piece, hand-piece holder and pedal

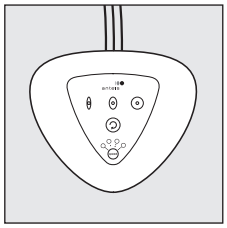
- Remove the power plug before proceeding with any cleaning.
- These components are reusable and should be used carefully and cleaned with an appropriate decontaminating product before and after each patient.
- Never use other organic solvents or aggressive chemical products.
- Never sterilize the control unit, hand-piece, hand-piece holder or pedal.
- Never place the control unit, hand-piece or pedal in liquid.
- After putting on the gloves, we strongly recommend using one hand for the patient and the other for the hand-piece.

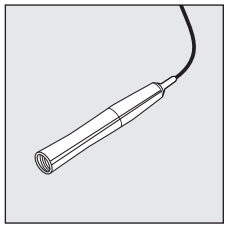
Needle, syringe and adaptor

- They are made for single use only and should be discarded after each patient.



Disposable



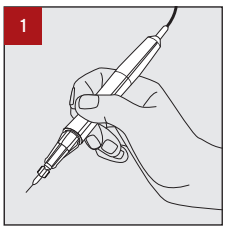


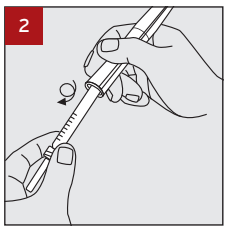
Reusable parts to be decontaminated and handled with care

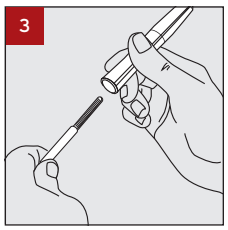
If the syringe breaks

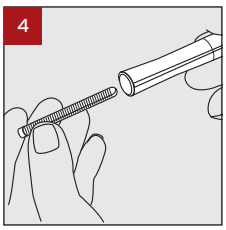
This procedure must be followed or serious damage may occur that is not covered by the manufacturer's warranty.

- 1 Keep the hand-piece held downwards at all times.
- Replace the cover of the needle.
- 2 Unscrew the adaptor.
- 3 Inject at maximum speed until the plunger comes completely out and remove it from the hand-piece.
- Remove any fragments of glass, especially in the groove of the plunger. Check that there are no bits of glass in the body of the hand-piece.
- You can rinse the plunger under water, taking care to dry it with a low-pressure air jet.
- 4 To re-fit the plunger, press the "return" key and position the plunger in the body by aligning the 2 grooves with the 2 metal rods located inside the body.
- Gently push the plunger until it is engaged inside the body and returns to its initial position.









Never grease or lubricate the plunger; otherwise, this may lead to future malfunctions.

9 | Conditions of warranty

Anteis guarantees the **Anteis Injection System** for 18 months from the date of purchase.
Implementation of this warranty requires presentation of the original invoice indicating the date of purchase.
This warranty is only applicable to usage that complies with the requirements of the directions for use.

No warranty is applicable where:

- A technical repair has been made to the apparatus by an individual not approved by Anteis.
- The apparatus has been damaged by an external source or by using it improperly (lightning, fire, water damage, dropping or negligence).
- The apparatus has been adapted for different operating standards from those indicated on the description plate located underneath the control unit.
- Purchase documents have been amended or altered.
- The serial number of the apparatus has been rendered illegible.
- The apparatus has been used with any other product not belonging to one of the Anteis aesthetic product lines.

In no case can this warranty be invoked to claim complete replacement of the apparatus or grant the right to damages or compensation. The **Anteis Injection System** cannot be the subject of a return, apart from under the conditions of the warranty.

Spare parts

You can obtain additional accessories from your reseller.

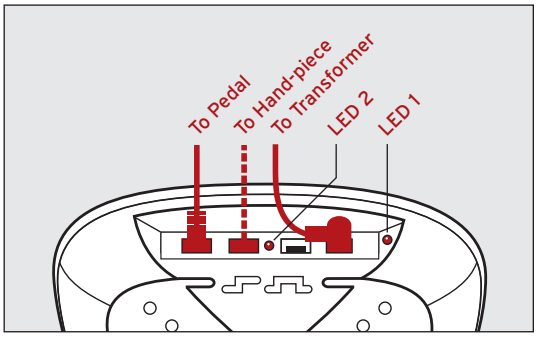
10 | FAQ

FAQ	Cause	Correction
Needle unscrewed during injection	Incorrect screwing	Make sure the needle is correctly assembled. (See chapter 5)
Security beep occurs during injection. Impossible to inject.	Wrong needle/product	Use needle/product provided or recommended by Anteis
	Blocked needle	Replace the needle
During the automatic plunger detection, the plunger does not stop.	The plunger stopper has been removed with the plunger rod while disassembling the regular syringe.	Clean your hand-piece (see chapter 8) and discard the failed syringe. With a new syringe, unscrew the plunger rod and make sure the plunger stopper stays in place. (See chapter 5)
	The automatic plunger detection has been initiated before screwing in the needle.	Screw needle before activating the plunger detection function.
Central unit switches off automatically. Unexpected plunger return.	To reduce energy consumption, the Injection System automatically switches off after 20 min.	To reactivate it, simply press the return key on the control unit or one of the 2 pedals.
Unexpected plunger return.	This phenomenon occurs when there is a micro-power cut while the device is functioning.	Have your electrical installation checked.

Clinical or technical questions?

If your **Anteis Injection System** does not work, try to identify the defective component by following the diagnosis protocol or call the Anteis Injection System call centre at **+41 22 308 93 76.**

11 | Diagnosis protocol



My Anteis Injection System does not work well:
The plunger does not move and I can't inject
or some functions do not work.

1. Disconnect the power plug for 10 sec. and reconnect it.

2. Is the LED 1 switched on? — Yes / No

3. Check the power plugs.
(On the wall, transformer and central unit)

4. Is the LED 1 switched on? — Yes / No

Power supply transformer has to be replaced.

5. Check that the plugs of the hand-piece and
the pedal are not inverted and correctly plugged.
If not, correct it!

6. Press one pedal for 2 seconds.

7. Have all 6 LED on the central unit flashed once? — No / Yes

8. Press the other pedal for 2 seconds.

9. Have all 6 LED on the central unit flashed once? — No / Yes

10. Press the return key for 2 seconds.

11. Have all 6 LED on the central unit flashed once? — No / Yes

Central unit has to be replaced.

12. Press one of the pedals.

13. Is LED 2 switched on? (Red or green) — Yes / No

14. Is the plunger moving out? (Wait until it stops...) — Yes / No

15. Press the return key.

16. Is LED 2 switched on green? — No / Yes

17. Is the plunger returning back? (Wait until it stops...) — Yes / No

Hand-piece has to be replaced or
plinger to be re-inserted (if missing).

18. Test of the pedals.
Press during 8 seconds the return key of the central
unit, until you hear a specific bip. Keep on pressing the
return key, and press each pedal or the central button.

19. Can you hear a buzzer while pressing
each pedal key? (Pedals + central button) — Yes / No

Pedal has to be replaced.

anteis

12 | Technical characteristics

Electromagnetic immunity

The Anteis Injection System is designed for use in an electromagnetic environment where the electromagnetic interference is controlled and defined in tables 1, 2 and 3 below.

The customer or user of the equipment must make sure that it is used in a defined environment. You can help prevent interference occurrence by respecting the minimum distance between RF communications devices (mobile phone or lap-top emitters) and the Anteis Injection System, as recommended in table 3, according to the communication equipment's power transmission.

1. Electromagnetic transmissions

Transmission Compliance Tests	Conformity	Electromagnetic environment – Advice
RF CISPR 11 Transmissions	Group 1	The Anteis Injection System uses RF power only for its internal operation. Furthermore, its RF transmissions are low level and cannot cause interference with electronic equipment situated nearby.
RF CISPR 11 Transmissions	Class B	
Transmission of EC 61000-3-2 Harmonics	Class A	Using the Injection System is appropriate in all types of establishments including those that are directly connected to the low-voltage national grid used to supply power to buildings for domestic purposes.
Variation in voltage / Flicker IEC 61000-3-3	Compliant	

2. Electromagnetic immunity

Immunity test	IEC 60601 testing level required	Level of compliance	Electromagnetic environment - Advice
Electrostatic discharge	+/- 6 kV contact	+/- 6 kV contact	The flooring should be wood, concrete or tiles. If it is covered with synthetic material, the relative humidity level should be greater than 30%.
(ESD) IEC 61000-4-2	+/- 8 kV air	+/- 8 kV air	
Rapid Transitories (TERS)	+/- 2 kV for power supply	+/- 2 kV	The quality of the power distribution network should be that of a commercial or hospital environment.
IEC 61000-4-4	+/- 1 kV for Entrees/sorties	+/- 1 kV	
Shock waves	+/- 1 kV differential mode	+/- 1 kV	
IEC 61000-4-5	+/-2 kV common mode	+/- 2 kV	
Trough, variations in voltage and interruptions Power briefs IEC 61000-4-11	< 5% UT · Trough > 95% UT for 0.5 cycle 40% UT · Trough 60% UT for 5 cycles 70% UT · Trough 30% UT for 25 cycles < 5% UT · Trough > 95% UT for 5 sec.	0 V / 10 ms 92 V / 100 ms 161 V / 500 ms 0 V / 5000 ms	The quality of the power distribution network should be that of a commercial or hospital environment. If the user requires continuous operation of the equipment during power supply interruptions from the grid, a UPS is recommended.
Magnetic field to network frequency (50/60 Hz) IEC 61000-4-8	3 A /m	Not applicable	The magnetic field level to grid frequency is typically that of a commercial or hospital environment.

Note: UT is the main power voltage before application of the test level.

12 | Technical characteristics

Immunity test	IEC 60601 Testing level required	Level of compliance
RF Conduit IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 V
RF Radiated IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	3 V/m

Electromagnetic environment - Advice

RF portable or mobile communications equipment should not be used, whatever the part of the equipment, including cables, at a distance less than that recommended and calculated from the equation applicable to the transmitter frequency.

Recommended separation distance

d = [3.5/V1] √P d = [3.5/E1] √P 80 MHz to 800 MHz d = [7/E1] √P 800 MHz to 2.5 GHz

in which P is the maximum power of the transmitter in watts stated by the manufacturer and d is the minimum recommended separation distance in metres (m)[b].

For fixed RF transmitters, the intensity of the field, determined by an electromagnetic study of the site should be lower than the compliance level required for each frequency range.
Interference could manifest itself in the neighbourhood of equipment bearing the following symbol:

Note 1: TO 80 MHz and 800 MHz, the widest frequency range applies.
Note 2: This advice does not apply to all situations.
Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.
• The intensity of field for fixed transmitters, such as base stations, radio, telephones (cellular/cordless) and land mobile radios, amateur radio, AM and FM radio and TV, cannot in theory be predicted with any precision. To assess the electromagnetic field due to a fixed transmitter, an electromagnetic study should be performed on site. If at the place the equipment is to be used, the field intensity measurement exceeds the above mentioned levels of compliance, an observation of the normal operation of the equipment should be made.
If applicable, if abnormal operation is observed, additional measures may prove necessary such as reorienting or moving the equipment.
• Above the 150 kHz to 80 MHz frequency range, the intensity of the field should be lower than 10 V/m.

3. Recommended separation distances between RF communications equipment (portable or mobile) and Anteis Injection System

Maximum power emitted the transmitter (W)	150 kHz to 80 MHz $d=[\frac{3,5}{V1}]\sqrt{P}$	80 kHz to 800 MHz $d=[\frac{3,5}{E1}]\sqrt{P}$	800 kHz to 2.5 GHz $d=[\frac{7}{E1}]\sqrt{P}$
0.01	0.12	0.12	0.12
0.1	0.37	0.37	0.37
1	1.17	1.17	1.17
10	3.69	3.69	3.69
100	11.67	11.67	11.67

For transmitters whose transmission power is not listed above, the separation distance (d in metres) by applying it to the frequency of the transmitter or P being the maximum power transmitted (in watts) as stated by the manufacturer.

Note 1: At 80 MHz and 800 MHz, the largest separation distance from the frequency range is applicable.
Note 2: This advice does not apply in all situations. Electromagnetic propagation is affected by the absorption of and reflection from structures, objects and people. Separation distance based on the frequency used by the transmitter.

13 | Notes

02/1209

INJECTION SYSTEM

anteis

Anteis S.A.
Chemin des Aulx 18
1228 Plan-les-Ouates
Geneva/Switzerland

Tel: +41 (0)848 747 848
Fax: +41 (0)848 949 849
mail@anteis.com
www.anteis.com

Swiss
Technology